## REMARKS/ARGUMENTS

In the Office Action mailed August 9, 2007, claims 1-3 were rejected. Additionally, the drawings were objected to. In response, Applicants hereby request reconsideration of the application in view of the amended claims and the below-provided remarks.

For reference, claims 1 and 2 are amended to remove the exemplary reference characters corresponding to the elements shown in the figures. Claims 4 and 5 are added. The subject matter of claims 4 and 5 is supported, for example, by the description at page 6, lines 26-29, of the specification. No claims are canceled.

Objections to the Drawings

Applicants have reviewed and considered the objections to the drawings and respectfully traverse all objections. The Office Action cites 37 C.F.R. §§ 1.83(n) and (o) in the objection and requires labels for blocks 1-7 in Fig. 1.

The requirements of 37 C.F.R. § 1.83(n) are directed to the use of graphical drawing symbols. However, nothing in this section addresses the use of labels for blocks that are otherwise designated with reference numbers and otherwise referred to and described in the specification. Rather, the cited section merely requires that symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable. Here, Applicants respectfully submit that the illustrated blocks are readily identifiable by inclusion of the specific references numbers which designate the illustrated blocks, as well as the corresponding descriptions provided for each block (referred to by the appropriate reference number) in the specification. Accordingly, Applicants respectfully submit that the use of reference numbers is sufficient, in this case, and nothing in 37 C.F.R. § 1.83(n) requires any additional designations or labels. Therefore, Applicants request that the objection to the drawings under 37 C.F.R. § 1.83(n) be withdrawn.

The requirements of 37 C.F.R. § 1.83(o) are directed to the use of descriptive legends. While the Office may require the use of a legend to understand the drawing,

Applicants respectfully submit that a legend should not be required to understand the subject matter illustrated in Fig. 1 because each of the blocks in Fig. 1 is designated by a specific reference number and is described, with reference to the appropriate reference number for each block, in the specification. Applicants submit that a review of the description provided in the specification provides adequate understanding of the indicated drawing, without the use of or need for a separate legend. Accordingly, Applicants respectfully submit that the drawing and accompanying description are sufficient, in this case, and that a separate legend is not necessary for understanding the subject matter of Fig. 1. Therefore, Applicants request that the objection to the drawings under 37 C.F.R. § 1.83(o) be withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 1 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Knutson et al. (U.S. Pat. Pub. No. 2003/0163822, hereinafter Knutson) in view of Cheung (U.S. Pat. No. 6,476,685, hereinafter Cheung). Additionally, claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Knutson in view of Cheung and further in view of Rollet et al. (U.S. Pat. No. 4,217,562, hereinafter Rollet). However, Applicants respectfully submit that these claims are patentable over Knutson, Cheung, and Rollet for the reasons provided below.

Independent Claim 1

Claim 1 recites "the arrangement comprising a polyphase mixer for mixing said specific signal channel to an intermediate frequency which is lower than twice the bandwidth of the channel, a polyphase IF filter for rejecting the negative frequencies in the mixer output signal and a polyphase group delay equalizer connected to the output of the polyphase IF filter" (emphasis added).

In contrast, the combination of cited references does not teach mixing a signal channel to an intermediate frequency which is lower than twice the bandwidth of the channel. Although the Office Action relies on Knutson as purportedly teaching this limitation, Knutson does not teach or suggest mixing a signal channel to an intermediate frequency which is lower than twice the bandwidth of the channel. Knutson merely

describes mixing or combining an intermediate oscillator signal with a down-converted satellite television signal via the mixer 134, generally. Knutson, paragraph 52. However, Knutson is silent as to the characteristics of the resulting frequency output by the mixer 134. Therefore, the combination of cited references does not teach all of the limitations of the claim because Knutson does not teach mixing a signal channel to an intermediate frequency which is lower than twice the bandwidth of the channel. Accordingly, Applicants respectfully submit that claim 1 is patentable over the combination of Knutson and Cheung at least because the combination of cited references does not teach or suggest mixing a signal channel to an intermediate frequency which is lower than twice the bandwidth of the channel.

Additionally, as a separate basis for patentability, the combination of cited references does not teach rejecting negative frequencies in the mixer output signal. Although the Office Action relies on Knutson as purportedly teaching this limitation, Knutson does not describe negative frequencies in the negative output signal. As explained above, Knutson is silent as to the frequency characteristics of the resulting frequency output by the mixer 134. Moreover, even if Knutson were to describe negative frequencies output by the mixer, Knutson does not describe rejecting negative frequencies in the output signal from the mixer 134. Although Knutson describes filtering out undesired noise signals (Knutson, paragraph 52), Knutson does not describe the undesired noise/signals as including negative frequencies. Therefore, the combination of cited references does not teach all of the limitations of the claim because Knutson does not teach rejecting negative frequencies in the mixer output signal. Accordingly, as a separate basis for patentability, Applicants respectfully submit that claim 1 is patentable over the combination of Knutson and Cheung at least because the combination of cited references does not teach or suggest rejecting negative frequencies in the mixer output signal.

Dependent Claims 2-5

Claims 2-5 depend from and incorporate all of the limitations of independent claim 1. Applicants respectfully assert claims 2-5 are allowable based on an allowable

base claim. Additionally, each of claims 2-5 may be allowable for further reasons, as described below.

In regard to claim 4, Applicants respectfully submit that claim 4 is patentable over the combination of Knutson and Cheung because the combination of cited references does not teach or suggest all of the limitations of the claim. Claim 4 recites "individual group delay equalizers within the cascade of group delay equalizers comprise different pole-zero patterns" (emphasis added). In contrast, Cheung does not appear to describe any relationship among the pole-zero patterns of individual equalizers within a cascade of equalizers. Although Cheung generally mentions placing a number of all pass networks in cascade, Cheung does not appear to mention whether the all pass networks within the cascade arrangement might have similar or dissimilar pole-zero patterns. Therefore, the combination of cited references does not teach all of the limitations of the claims because Cheung does not teach individual equalizers within a cascade of group delay equalizers having different pole-zero patterns.

In regard to claim 5, Applicants respectfully submit that claim 5 is patentable over the combination of Knutson and Cheung because the combination of cited references does not teach or suggest all of the limitations of the claim. Claim 5 recites "individual group delay equalizers within the cascade of group delay equalizers comprise same pole-zero patterns" (emphasis added). In contrast, Cheung does not appear to describe any relationship among the pole-zero patterns of individual equalizers within a cascade of equalizers, as explained above. Although Cheung generally mentions placing a number of all pass networks in cascade, Cheung does not appear to mention whether the all pass networks within the cascade arrangement might have similar or dissimilar pole-zero patterns. Therefore, the combination of cited references does not teach all of the limitations of the claims because Cheung does not teach individual equalizers within a cascade of group delay equalizers having the same pole-zero patterns.

## CONCLUSION

Applicants respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-3444** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-3444** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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